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Amendments to the Claims:

Please amend claims 1 and 17, and add claims 60-63 as shown in the following listing of claims. This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A feedforward equalizer for equalizing a sequence of signal samples received from a remote transmitter, the feedforward equalizer being included in a receiver having a decoder, the feedforward equalizer comprising:

a non-adaptive filter operable to receive the signal samples and to produce a filtered signal;

[[a]] an adaptive noise cancellation stage element operable to subtract from the filtered signal a noise signal received from a noise computing module of the receiver and to produce a noise-reduced filtered signal; and

a gain stage operable to receive the noise-reduced filtered signal and to adjust the gain of the feedforward equalizer by adjusting the amplitude of the noise-reduced filtered signal, the amplitude of the noise-reduced filtered signal being adjusted so as to fit in an operational range of the decoder;

wherein the adaptive noise cancellation element is adaptive based on a normalized adaptation error that is determined by dividing a decoder error of the decoder by a gain value of the gain stage.

2. (original) The feedforward equalizer of claim 1 wherein the feedforward equalizer does not enhance noise.

3. (previously presented) The feedforward equalizer of claim 1 wherein the receiver has a timing recovery module for setting a sampling phase and wherein the feedforward equalizer does not directly affect the sampling phase setting of the timing recovery module of the receiver.

4-6. (cancelled)

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7. (original) The feedforward equalizer of claim 1 wherein the non-adaptive filter substantially eliminates from the received signal samples intersymbol interference introduced by pulse shaping at the remote transmitter.

8-10. (Cancelled)

11. (original) The feedforward equalized of claim 1 wherein adjustment of the gain of the feedforward equalizer is programmable.

12-16. (cancelled)

17. (currently amended) A method for equalizing a sequence of input samples received at a receiver from a remote transmitter, the receiver having a decoder, the method comprising:

    (a)   filtering the input samples using a non-adaptive filter to produce a filtered signal,;

    (b)   subtracting from the filtered signal a noise signal received from a noise computing module of the receiver to produce a noise-reduced filtered signal; and

    (c)   adjusting, using a gain stage, the amplitude of the noise-reduced filtered signal so that the amplitude of the noise-reduced filtered signal fits in an operational range of the decoder; and

    (d)   adjusting coefficients of the noise computing module based on a normalized adaptation error that is determined by dividing a decoder error of the decoder by a gain value of the gain stage .

18. (previously presented) The method of claim 17 wherein filtering the input samples and adjusting the amplitude of the filtered signal do not amplify noise.

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19. (previously presented) The method of claim 17 wherein the receiver has a timing recovery module for setting a sampling phase and wherein operations (a) and (c) do not directly affect the sampling phase setting of the timing recovery module of the receiver.

20-22. (cancelled)

23. (previously presented) The method of claim 17 wherein filtering the input samples includes substantially eliminating from the received signal samples intersymbol interference introduced by pulse shaping at the remote transmitter.

24-26. (cancelled)

27. (previously presented) The method of claim 17 wherein adjustment of the amplitude of the filtered signal is programmable.

28-59. (cancelled)

60. (new)   The feedforward equalizer of claim 1 wherein the decoder error is obtained by subtracting a tentative decision of the decoder from a soft decision of the decoder.

61. (new)   The feedforward equalizer of claim 1 wherein dividing a decoder error of the decoder by a gain value of the gain stage comprises performing an approximate division using only the four most significant bits of a digital gain value of the gain stage.

62. (new)   The method of claim 17 wherein the decoder error is obtained by subtracting a tentative decision of the decoder from a soft decision of the decoder.

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63. (new)   The method of claim 17 wherein dividing a decoder error of the decoder
by a gain value of the gain stage comprises performing an approximate division using only the
four most significant bits of a digital gain value of the gain stage.

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